Kerry Zhang

(571) 420-2497

kerryzhang@cmu.edu

March 1, 2024

Dear Professor Dirk Jenter and Professor Kelly Shue,

I am a Ph.D. candidate in the Finance program at Carnegie Mellon University's Tepper School of Business writing to express my interest in attending the Workshop on the Economics of Executive Compensation in June.

My current research focuses on the role of equity compensation on financial performance. The topics outlined for the workshop, particularly regarding outside options in labor markets and the variation in compensation plans, directly align with my current research focus. Participating in this workshop would not only enhance my current research but also contribute significantly to my long-term academic goals. I am eager to learn of current research by other participants studying executive compensation and looking forward to the keynote lecture by Professor Kevin Murphy.

A detailed account of my academic background and research endeavors can be found in the enclosed application. Professor Chester Spatt will supply a letter of recommendation for the application.

Thank you for considering my application. I am enthusiastic about the prospect of contributing to and learning from the workshop.

Sincerely,

Kerry Zhang

Kerry Paul Zhang

kerryzhang@cmu.edu
(571) 420-2497 | 4765 Forbes Avenue, Pittsburgh, PA

EDUCATION

Carnegie Mellon University – Tepper School of Business — Pittsburgh, PA
Ph.D. Financial Economics — 2020 - Expected 2025
Committee: Brent Glover (Chair), Chester Spatt, Bryan Routledge, Yucheng Liang

The University of Texas at Austin — Austin, TX
M.S. Computer Science — 2019 - 2023

The University of Chicago — Chicago, IL
A.B. Economics, A.B. Public Policy, Minor in Statistics | General and Department Honors — 2012 - 2016

RESEARCH IN PROGRESS

Equity Compensation and Firm Value
Presentations: Two Sigma Investments PhD Symposium (2023)

In many industries, equity compensation ties a substantial portion of non-executive employee income to firm performance. We hypothesize shocks affecting equity-paying firms are amplified due to their simultaneous impact on firm profitability and employee turnover. To measure this effect, we study the forfeiture rates of unvested equity grants against employee returns in the technology industry, and we find that a 10% increase in returns reduces forfeiture rates by 5%. To understand the role of equity sensitivity on firm value, we incorporate our hypothesis into an investment model and find that the cross-sectional average and standard deviation of firm value are weakly increasing in the equity share. This amplification effect implies a channel by which a firm's capital structure is relevant to its value, in contrast to the Miller-Modigliani Theorem of capital structure irrelevance.

Frictions Concerning the Redemption Right in Special Purpose Acquisition Companies

By reversing the traditional going public process of raising capital after identifying a specific company, Special Purpose Acquisition Companies (SPACs) bring novel considerations to historical regulations governing capital formation and investor protection. We document three potential risks associated with the redemption right, the primary means for the shareholder to protect themselves from misaligned incentives arising from the SPAC structure. We use recent empirical data to illustrate these risks, providing evidence of adverse selection, the disincentive to vote against bad mergers, and dilutionary impacts of redemption. Linking these three issues, we provide a discussion of their significance in the context of the evolving SPAC structure and new regulatory priorities.

The Market's View of Executive Effort *with Yucheng Liang (CMU) and Sean Cao (Maryland)*

We study whether investors, reacting to earnings announcements, consider how much control executives had over internal and external changes impacting firm profitability. Using a large dataset of quarterly earnings transcripts, we analyze executives' summaries of material changes impacting business operations and compare our results against analyst forecasts in I/B/E/S and subsequent stock performance following the earnings announcement. Our preliminary results suggest that markets react equally favorably to positive business changes regardless of executive effort, but differentially to negative business changes with less favorable post-earnings performance when executives attribute greater control during negative changes.

Compensation Structure, Determinants of Firm Turnover, and Employee Outcomes

Employee compensation may be structured to be correlated or uncorrelated with firm performance. Linking employee job histories data and employer financial performance, we study the differential relationship between firm outcomes and employee exits and post-exit career trajectory depending on the form of compensation. We hypothesize that higher volatility of financial performance to peer firms may decrease employee tenure and better employer performance may result in better placements for employees post-departure.

PROFESSIONAL EXPERIENCE

Affirm San Francisco, CA
Quantitative Markets Lead – Affirm Capital Markets 2019 – 2020

Developed quantitative financial models for Affirm's short-term unsecured BNPL consumer credit portfolio using Python, VBA, and SQL as part of a team responsible for financing new originations via forward flows, securitizations, and warehouse lines of credit.

J.P. Morgan Chase & Co. Washington, D.C.
Senior Research Analyst – J.P. Morgan Chase Institute 2016 – 2019

Conducted empirical economic research on J.P. Morgan Chase's proprietary datasets (38 million accounts; 1T+ transactions) using R, Python, and SQL with a focus on household finance, healthcare, and labor economics.

SKILLS AND OTHER

Ph.D. Coursework: Microeconomics, Macroeconomics, Econometrics, Contract Theory, Valuation, Corporate Finance and Financial Intermediation, Financial Institutions and Markets, Dynamic Models in Corporate Finance, Topics in Accounting Research, Machine Learning

Ph.D. Teaching Assistant Experience: Financial Regulation in the Digital Age (Undergrad; MBA), Real Estate (MBA)

Ph.D. Awards: NSF Graduate Research Fellowship Program Honorable Mention (2020), PNC Presidential Fellowship (2024)

Programming: Professional working experience with Python, R, SQL, and VBA

Statement of Motivation

Kerry Zhang

My research focuses on the intersection of compensation and firm performance, specifically on how the structuring of equity compensation affects the turnover rate of employees, financial performance, and employee outcomes. The Workshop on the Economics of Executive Compensation, with its emphasis on the labor market, work incentives, and the varying structures of pay contracts, aligns very closely with multiple components of my current research and future academic aspirations.

While equity compensation has been a central topic of executive compensation, I am interested in learning about and comparing the mechanisms in executive compensation to the increasingly similar trend of equity-based compensation for non-executive employees. This comparative analysis aims to understand how equity compensation impacts different tiers within an organization and how these variances in turn influence the overall corporate health and performance. These compensation contracts are often structured in similar terms as equity grants with multi-year vesting schedules. Similarly, employees of different levels may face similar considerations in decisions regarding whether to stay with a firm or begin a job search.

To answer these questions, I have constructed a novel dataset using equity benefit plan activity which allows me to examine the forfeiture rate of unvested equity grants. Linking this to financial performance data from Compustat, I've found that within the technology industry, a 10% increase in average employee returns at the beginning of a quarter is associated with a 5% reduction in forfeiture of unvested equity. I incorporated these results into a structural model which finds that an increasing equity share increases the cross-sectional average and standard deviation of firm values.

I am currently extending this line of research with a dataset on job histories of employees both in and below the c-suite, which provides a more detailed view of employees' realized gains or losses, firm turnover rates, and post-departure outcomes. While my prior research focused on equity compensation's impact on the extensive margin (i.e. exits), my current research hopes to address the impact on the intensive margin (i.e. productivity) by examining how human capital is formed and maintained within the firm. Finally, I am also conducting research on executive statements made during earnings announcements and the extent to which they attribute business changes to their own efforts. I hypothesize this may be differentially impacted by the structure or size of executive compensation.

My empirical research endeavors have provided me with a robust foundation in analyzing and interpreting data related to compensation structure and firm performance. This workshop presents a unique opportunity to both deepen my theoretical understanding of these topics and to broaden my understanding of ongoing research which touches other economic fields such as labor economics and contract theory. Therefore, I would like to take advantage of the learning opportunities in this workshop to develop a more comprehensive and nuanced framework for interpreting the results of my current empirical research on equity compensation and firm performance. This enhanced understanding will enable me to place my empirical results within a more informed and robust theoretical framework, thereby improving not only the interpretation of these results but also integrating and contributing to the ongoing research in the field today.

Carnegie Mellon Tepper SCHOOL OF BUSINESS

Tepper School of Business
William Larimer Mellon, Founder

Carnegie Mellon University
5000 Forbes Avenue
Pittsburgh, Pennsylvania 15213-3890

Chester Spatt
Pamela R. and Kenneth B. Dunn
Professor of Finance

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www.tepper.cmu.edu/spatt

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March 5, 2024

Recommendation Letter for Kerry Zhang
NBER Workshop on the Economics of Executive Compensation

Att: Professor Dirk Jenter and Professor Kelly Shue
c/o: maranjian@nber.org

Dear Dirk and Kelly,

I am writing to strongly support and endorse the application of Kerry Zhang to participate in the NBER Workshop on the Economics of Executive Compensation scheduled in June. Kerry is currently completing his fourth year in the finance doctoral program at the Tepper School of Business at Carnegie Mellon, where he presented his doctoral dissertation proposal last fall. I am a member of Kerry's dissertation committee, which was formed at the time of his proposal and had been a reader previously of his first-year summer paper, which addressed adverse selection and the structure of SPACs. Kerry also was an excellent student in my doctoral course on "Financial Institutions and Markets" two years ago.

I have been extremely impressed with Kerry throughout our finance doctoral program. In addition to being a strong student, he is demonstrating considerable energy and insight in his research and a strong (and independent) selection of research topics. On the basis of this, I am very optimistic about his research potential. The main focus of his dissertation research is the connection between employee compensation across various employee tiers, firm returns and volatility and the forfeiture rates of unvested equity grants. These are interesting and important questions. Indeed, while I did not pose these questions to Kerry, I have been struck by these aspects since thinking about employee options during my time as Chief Economist of the SEC (2004-2007) when methods for valuing employee stock options were a central issue on which I and my team needed to opine.

If you require any further information or would like to discuss Kerry Zhang's qualifications in more detail, please feel free to contact me at cspatt@andrew.cmu.edu or (412) 268-8834. In summary, I strongly support the application of Kerry Zhang to participate in the upcoming NBER program as I am very optimistic that he will make valuable contributions in economics and finance and the Compensation program appears to be an exceptionally good fit.

Best,



Chester Spatt, Pamela R. and Kenneth B. Dunn Professor of Finance

Tepper School of Business, Carnegie Mellon University